

: *What are the 10 most cited CDSS articles?*

by Daniel J. Power

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Google Scholar was searched using the search term "clinical decision support systems." Garg et. al (2005) was the most frequently cited with 2942 citations. They concluded "Many CDSSs improve practitioner performance. To date, the effects on patient outcomes remain understudied and, when studied, inconsistent". They examined 100 studies that met their inclusion criteria. The studies included "randomized and nonrandomized controlled trials that evaluated the effect of a CDSS compared with care provided without a CDSS on practitioner performance or patient outcomes."

The next most frequently cited article by Kawamoto, et al. (2005), has had 2189 citations. The researchers "wanted to identify features of clinical decision support systems critical for improving clinical practice". Seventy studies were included in the review. Decision support systems significantly improved clinical practice in 68% of trials. Four features were "independent predictors of improved clinical practice: automatic provision of decision support as part of clinician workflow (P

Hunt et al (1998), cited by 1880 articles, concluded that "CDSSs can enhance clinical performance for drug dosing, preventive care, and other aspects of medical care, but not convincingly for diagnosis. The effects of CDSSs on patient outcomes have been insufficiently studied.

Effects of computerized physician order entry and clinical decision support systems on medication safety: a systematic review

R Kaushal, KG Shojania, DW Bates - Archives of internal ..., 2003 - jamanetwork.com
Background Iatrogenic injuries related to medications are common, costly, and clinically significant. Computerized physician order entry (CPOE) and clinical decision support systems (CDSSs) may reduce medication error rates. Methods We identified trials that ...

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Ten commandments for effective clinical decision support: making the practice of evidence-based medicine a reality

DW Bates, GJ Kuperman, S Wang... - Journal of the ..., 2003 - academic.oup.com
... Article Navigation. Ten Commandments for Effective Clinical Decision Support: Making the Practice of Evidence-based Medicine a Reality. David W. Bates, MD, MSc.

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Effects of computer-based clinical decision support systems on clinician performance and patient outcome: a critical appraisal of research

ME Johnston, KB Langton, RB Haynes... - Annals of internal ..., 1994 - Am Coll Physicians

Objective: To review the evidence from controlled trials of the effects of computer-based clinical decision support systems (CDSSs) on clinician performance and patient outcomes.

Data Sources: The literature in the MEDLARS, EMBASE, SCISEARCH, and INSPEC ...

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Medication-related clinical decision support in computerized provider order entry systems: a review

GJ Kuperman, A Bobb, TH Payne... - Journal of the ..., 2007 - academic.oup.com

While medications can improve patients' health, the process of prescribing them is complex and error prone, and medication errors cause many preventable injuries. Computer provider order entry (CPOE) with clinical decision support (CDS), can improve patient safety and ...

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Clinical decision support systems for the practice of evidence-based medicine

I Sim, P Gorman, RA Greenes... - Journal of the ..., 2001 - academic.oup.com

Background: The use of clinical decision support systems to facilitate the practice of evidence-based medicine promises to substantially improve health care quality. Objective:

To describe, on the basis of the proceedings of the Evidence and Decision Support track at ...

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Clinical decision-support systems

MA Musen, B Middleton, RA Greenes - Biomedical informatics, 2014 - Springer

These keywords were added by machine and not by the authors. This process is experimental and the keywords may be updated as the learning algorithm improves ... We are grateful to the co-authors of the chapter on this subject that appeared in the previous edition of this text ...

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Effect of clinical decision-support systems: a systematic review

TJ Bright, A Wong, R Dhurjati, E Bristow... - Annals of internal ..., 2012 - Am Coll Physicians

Background: Despite increasing emphasis on the role of clinical decision-support systems (CDSSs) for improving care and reducing costs, evidence to support widespread use is lacking. Purpose: To evaluate the effect of CDSSs on clinical outcomes, health care ...

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Evaluating informatics applications—clinical decision support systems literature review

B Kaplan - International journal of medical informatics, 2001 - Elsevier

This paper reviews clinical decision support systems (CDSS) literature, with a focus on evaluation. The literature indicates a general consensus that clinical decision support systems are thought to have the potential to improve care. Evidence is more equivocal for ...

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References

Garg, A. X., K. J. N. Adhikari, H. McDonald, M. P. Rosas-Arellano, P. J. Devereaux, J. Beyene, J. Sam, and R. B. Haynes, "Effects of computerized clinical decision support systems on practitioner performance and patient outcomes: a systematic review," JAMA, 2005, jamanetwork.com at URL

Hunt, D. L., R. B. Haynes, S. E. Hanna, and K. Smith, "Effects of computer-based clinical decision support systems on physician performance and patient outcomes: a systematic review," JAMA, 1998, 280(15):1339-1346 (doi:10.1001/jama.280.15.1339)

Kawamoto, K., C. A. Houlihan, E. A. Balas, and D. F. Lobach, "Improving clinical practice using clinical decision support systems: a systematic review of trials to identify features critical to success," BMJ, 2005, Apr 2; 330(7494): 765, BMJ.com at URL
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC555881/> and doi: 10.1136/bmj.38398.500764.8F

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